Choi Juho

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Education

Korea Institute of Energy Technology (KENTECH) **Mar. 2023 – Present**
Undergraduate Naju-si, South Korea
Major: Energy Engineering (AI, Grid-modernization)

Daejeon Daeshin High School **Mar. 2020 – Feb. 2023**
High school graduation Daejeon, South Korea

Daejoen Hagi middle school **Mar. 2017 – Feb. 2020**
Daejeon, South Korea

Research Interests

Physiological data analysis, Sleep-tech (technology about sleep), SLAM(Simultaneous Localization and Mapping), Embedded system, Autonomous vehicles, Time-series data analysis(EEG, ECG, audio, etc..)

Research and other Experience

Research Experience

Undergraduate Researcher at Korea Institute of Energy Technology (KENTECH) Feb. 2023 – Present
Intelligent Mobile Computing Lab (*Naju-si, South Korea*)

- Interactive Data Creation in WMGPT
- Learn data science fundamentals and process BVP data

Other Experience

Student Ambassador at KENTECH Aug. 2023 – Present

- Did following activities Working as a student ambassador. (1) Filming, planning, and editing school promotional videos to produce one video per month (2) Planning and designing a community website for continuous exchanges with high schools, and working as a marketing team leader to attract website users

Ongoing and Completed Projects

Ongoing Projects

- **Audio-based real-time Pedestrian Detecting and Localization system.** : This project aims to backtrack the location of speech received from three or more microphone arrays using GGC-PHAT and TDOA operations. (2023).

Completed Projects

- **Optimizing PID coefficient of PID control applied AI-based line tracer robot using computational vision.** : This project applied PID control to optimize the driving speed and driving error of an AI line tracer robot trained with Resnet-22, and calculated the error with the trajectory obtained through the image overlay, and obtained the coefficients of each PID through the four-dimensional cost function gradient descent method. (2022).
- **Improving the EEG classifier model accuracy using image overlay and concatenate method.** :The project utilized image overlay and image concenate to improve the performance of sleep cycle prediction from sleep data, resulting in a 4% improvement in the accuracy of the model, and resampling and interpolation techniques were applied to confirm that the results were consistent with the actual human sleep cycle. (2023)

Programming and Technical Skills

Languages: Python, R, SQL
Developer Tools: Autodesk Fusion360, Solidworks, SPSS
Technologies/Frameworks: Adobe Premiere pro, Adobe After effect, Blender, MS Office, Latex, ZOOM, Linux

Distinction Awards

- **Full-scholarship from KENTECH :** 100,300,000 KRW

Language Proficiency

- **Korean** (Mother toungue).
- **English** (Intermediate).
- **Japanese** (Basic Conversation).